



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

MAY 8, 2001

OFFICE OF  
SOLID WASTE AND EMERGENCY  
RESPONSE

**MEMORANDUM**

**SUBJECT:** National Remedy Review Board Recommendations for the Bunker Hill Superfund Site

**FROM:** Bruce K. Means, Chair  
National Remedy Review Board

**TO:** Mike Gearheard, Director  
Office of Environmental Cleanup  
EPA Region 10

**Purpose**

The National Remedy Review Board (NRRB) has completed its review of the proposed Superfund cleanup action to address "mine water management" at the Bunker Hill Superfund Site in Kellogg, ID. This memorandum documents the NRRB's advisory recommendations.

**Context for NRRB Review**

The Administrator announced the NRRB as one of the October 1995 Superfund Administrative Reforms to help control response costs and promote consistent and cost-effective decisions. The NRRB furthers these goals by providing a cross-regional, management-level, "real time" review of high cost proposed response actions prior to their being issued for public comment. The board reviews all proposed cleanup actions that exceed its cost-based review criteria.

The NRRB review evaluates the proposed actions for consistency with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and relevant Superfund policy and guidance. It focuses on the nature and complexity of the site; health and environmental risks; the range of alternatives that address site risks; the quality and reasonableness of the cost estimates for alternatives; regional, state/tribal, and other stakeholder opinions on the proposed actions, and any other relevant factors.

Generally, the NRRB makes "advisory recommendations" to the appropriate regional decision maker. The region will then include these recommendations in the Administrative Record for the site before it issues the proposed response action for public comment. While

the region is expected to give the board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of response options, may influence the final regional decision. The board expects the regional decision maker to respond in writing to its recommendations within a reasonable period of time, noting in particular how the recommendations influenced the proposed cleanup decision, including any effect on the estimated cost of the action. It is important to remember that the NRRB does not change the Agency's current delegations or alter in any way the public's role in site decisions.

## **Overview of the Proposed Action**

The site package described the investigation and study of the contamination of surface waters from the release of highly contaminated acid mine drainage (AMD) from the Bunker Hill Mine in Kellogg, Idaho to Bunker Creek and the South Fork of the Coeur d'Alene River. Metals concentrations detected in the untreated AMD are up to 2,200 times greater than Idaho water quality standards (WQSs) for protection of freshwater aquatic life and human health. A tiered set of alternatives to minimize the amount of AMD generated by the mine, including upgrading the existing treatment plant and management of the AMD water treatment sludges, were evaluated. This proposed action was described as "OU-3" in the board's package, but may be undertaken as an amendment to the September 1992, Record of Decision, for the Bunker Hill Non-Populated Areas operable unit.

## **NRRB Advisory Recommendations**

The NRRB reviewed the informational package (dated February 2000) for this proposal and discussed related issues with EPA Remedial Project Manager Mary Kay Voytilla, and State Project Manager Nick Zilka, on March 21, 2001. Based on this review and discussion the board offers the following comments:

- Based on the information contained in the package, alternative 2 (AMD treatment plant improvements only) appeared to represent the lowest cost protective remedy for the site given its lower capital and operation and maintenance costs. The board recommends that the proposed plan and ROD include better justification to support selection of alternative 3. If alternative 3 is selected, the board supports a phased approach with mitigation measures starting at locations of most significant effect on AMD quality and volume (i.e., Milo Creek infiltration) in order to reduce volumes of water to be treated.
- The package as presented to the board did not clearly justify a need for remedial action based on human health or ecological risk; instead, it based its evaluation of threat on simple exceedances of water quality standards. The board recommends that the region clarify the benefits of the proposed action in terms of human health and ecological risk reduction.
- The region and state have developed Total Maximum Daily Loads (TMDLs) criteria for the Coeur d'Alene Basin as part of a water quality management program for the entire watershed. The board notes that the preferred alternative will meet the Idaho water quality standard and in general meets the TMDL allocation for the OU3 discharge at no additional cost. However, the package is unclear in its description of ARARs. For example, the board notes that some language (e.g., Remedial Action Objective #2) could be misinterpreted as suggesting that TMDLs are ARARs. The Region should clarify this language where it appears. The board also recommends that the ROD clearly identify which federal and state requirements are applicable, which are relevant and appropriate, and which are "to be considered."

- The board's package focused primarily on water and waste/residuals management strategies that address OU-specific contamination. Given the wide range of water treatment sludge and sediment management activities anticipated for the broader Coeur d'Alene basin as a result of the final basin-wide cleanup, the board encourages the region to continue to review and coordinate facility design issues for this action with the broader cleanup needs of the basin.
- The board notes that sludge management option A (using the central impoundment area (CIA) for disposal of water treatment sludge) will result in significant cost savings (>\$4.5 million) over the other sludge management options. However, it appears that local land use planning for the CIA may impact whether this property is available for sludge management in the future. It is recommended that the region and the State of Idaho (which will be responsible for continued operation and maintenance) work with local land use planners and the community to further evaluate the potential benefits of Option A, before selecting the long term disposal options for the treatment plant sludges.
- The board noted that the substantial variations in acid mine drainage (AMD) flow rates and contaminant concentrations into AMD storage may present opportunities to reduce the treatment system needs during periods of high flow, with resultant capital and operation and maintenance cost savings. For example, the treatment plant would utilize the lined pond and in-mine storage to equalize the AMD flow. Permitting a portion of the flow to bypass the treatment plant under certain (but protective) conditions reduces the need for lime and increases the service life of the filters. The board recommends the region consider these opportunities during remedy design.

The NRRB appreciates the region's efforts to work closely with the state and community groups at this site. We encourage Region 10 management and staff to work with their regional NRRB representative and the Region 4/10 Accelerated Response Center in the Office of Emergency and Remedial Response to discuss any appropriate follow-up actions.

Thank you for your support and the support of your staff in preparing for this review. Please give me a call at 703-603-8815 should you have any questions.

cc: M. Shapiro (OSWER)  
 S. Luftig (OSWER)  
 L. Reed (OERR)  
 B. Breen (OSRE)  
 J. Woolford (FFRRO)  
 C. Hooks (FFEO)  
 R. Hall (OSW)  
 M. K. Voytilla (Region 10)  
 OERR Regional Center Directors  
 C. Moss (Office of the Governor, Boise, ID)  
 N. Zilka (IDEQ)

Mailing addresses for the last two non-EPA cc's.

Chuck Moss, Director  
Bunker Hill Superfund Project Team  
Office of the Governor  
700 W. Jefferson, Room 122  
P.O. Box 83720  
Boise, Idaho 83720-0032

Nick Zilka  
Project Manager  
Idaho Department of Environmental Quality  
Superfund Project Office  
1005 West McKinley Avenue  
Kellogg, Idaho 83837